



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,255	10/24/2005	Satoru Tsurumaki	19291-006US1 C-679US	2756
26211	7590	12/31/2007		
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER ALLI, IYABO	
			ART UNIT 2877	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/554,255

Applicant(s)

TSURUMAKI ET AL.

Examiner

IYABO S. ALLI

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/24/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims **8** and **16** recites the limitation "the template" in the last line of the claim.

There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **1-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Itako** (2004/0151359) in view of **Suzuki et al.** (6,128,401). ('**Suzuki**')

**As to claim 1, Itako** discloses a transmission optical sensor **61** which emits transmission light to a sheet **7** to obtain an image of the sheet **7** based on the transmission light (Paragraph 29, lines 9-10); watermark area extracting means **65** for extracting an image of a watermark area where a watermark pattern is present, from the image obtained by the transmission optical sensor (Paragraph 33, lines 1-8 and Figs. 2 and 3a); and identification object image data extracting means **6** for extracting identification object image data that is used as an object of identification in identifying

the sheet **7**, from the watermark area extracted by the watermark area extracting means **65** (Paragraph 26, lines 3-5).

**Itako fails to disclose** unnecessary image detecting means for detecting an unnecessary image in the identification object image data extracted by the identification object image data extracting means; and sheet identifying means for identifying the sheet based on the identification object image data and the unnecessary image detected by the unnecessary image detecting means.

However, **Suzuki** teaches unnecessary image detecting means for detecting an unnecessary image in the identification object image data extracted by the identification object image data extracting means (Column 13, lines 30-39 and Fig. 3); and sheet identifying means for identifying the sheet **204** based on the identification object image data and the unnecessary image detected by the unnecessary image detecting means (Column 17, lines 57-62).

It would have been obvious to one skilled in the art at the time of the invention to include the unnecessary image detecting means of **Suzuki** in the identifying device of **Itako** in order to reduce the amount of counterfeit material being made or distributed.

**As to claim 2, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 1 above, **in addition Suzuki** teaches the identification object image data extracting means comprises watermark pattern displacement calculating means for calculating a displacement of the watermark pattern relative to the watermark area extracted by the watermark area extracting means (Column 4, lines 53-56 and Fig. 3),

whereby the identification object image data is extracted from the watermark area based on the displacement calculated by the watermark pattern displacement calculating means (Column 4, lines 56-59 and Fig. 3).

**As to claim 3, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 2 above, **in addition Suzuki** teaches the watermark area information calculating means **410** for calculating watermark area information of the watermark area extracted by the watermark area extracting means (Column 5, lines 51-56 and Figs. 3 and 4); and watermark area gravity center calculating means **step 1104** for calculating center of gravity of the watermark area based on the watermark area information calculated by the watermark area information calculating means **410**, whereby the displacement of the watermark pattern is calculated based on the center of gravity of the watermark area calculated by the watermark area gravity center calculating means **step 1104** (Column 10, lines 34-37 and Fig. 12).

**As to claim 4, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 3 above, **in addition Suzuki** teaches the sheet identifying means identifies the sheet **204** based on the watermark area information calculated by the watermark area information calculating means **410** (Column 10, lines 34-37 and Fig. 4).

**As to claim 5, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 3 above, **in addition Suzuki** teaches the watermark area information comprises area, degree of circularity, and length of circumference of the watermark area (Column 10, lines 24-27 and Fig 13).

**As to claim 6, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 1 above, **in addition Itako** teaches a template that has previously been obtained from an authentic sheet (Paragraph 33, lines 1-11).

**Itako fails to disclose** the unnecessary image detecting means comprises difference calculating means for calculating a difference between the identification object image data extracted by the identification object image data extracting means and whereby an unnecessary image in the identification object image data is detected based on the difference calculated by the difference calculating means.

However, **Suzuki** teaches the unnecessary image detecting means comprises difference calculating means for calculating a difference between the identification object image data extracted by the identification object image data extracting means and whereby an unnecessary image in the identification object image data is detected based on the difference calculated by the difference calculating means (Column 4, lines 56-59 and Fig. 3).

It would have been obvious to one skilled in the art at the time of the invention to include the unnecessary image detecting means of **Suzuki** in the identifying device of **Itako** in order to reduce the amount of counterfeit material being made or distributed.

**As to claim 7, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 6 above, **in addition Itako** teaches the sheet identifying means identifies the sheet based on the difference calculated by the unnecessary image detecting means (Paragraph 26, lines 3-5).

**As to claim 8, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 1 above, **in addition Itako** teaches the sheet identifying means identifies the sheet by comparing the identification object image data corrected for the unnecessary image detected by the unnecessary image detecting means with the template (Paragraph 33, lines 1-11).

**As to claim 9, Itako** discloses irradiating transmission light to a sheet **7** (Paragraph 29, lines 6-10); obtaining an image of the sheet **7** based on the transmission light (Paragraph 31, lines 1-4); extracting an image of a watermark area where a watermark pattern is present, from the obtained image (Paragraph 33, lines 1-8); extracting identification object image data that is used as an identification object in identifying the sheet **7**, from the extracted watermark area (Paragraph 26, lines 3-5).

**Itako fails to disclose** detecting an unnecessary image in the extracted identification object image data; and identifying the sheet based on the detected unnecessary image and the identification object image data.

However, **Suzuki** teaches detecting an unnecessary image in the extracted identification object image data (Column 13, lines 30-39); and identifying the sheet based on the detected unnecessary image and the identification object image data (Column 17, lines 57-62).

It would have been obvious to one skilled in the art at the time of the invention to include the unnecessary image detecting means of **Suzuki** in the identifying device of **Itako** in order to reduce the amount of counterfeit material being made or distributed.

**As to claim 10, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 9 above, **in addition Suzuki** teaches calculating a displacement of the watermark pattern relative to the watermark area; and extracting the identification object image data from the watermark area based on the displacement thus calculated (Column 10, lines 34-37).

**As to claim 11, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 10 above, **in addition Suzuki** teaches watermark area information of the watermark area; calculating center of gravity of the watermark area based on the watermark area information thus calculated; and calculating the displacement of the watermark pattern based on the center of gravity of the watermark area thus calculated (Column 10, lines 34-37 and Fig. 12).

**As to claim 12, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 11 above, **in addition Suzuki** teaches the sheet **204** is identified based on the watermark area information (Column 10, lines 34-37).

**As to claim 13, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 11 above, **in addition Suzuki** teaches the watermark area information comprises area, degree of circularity, and length of circumference of the watermark area (Column 10, lines 24-27 and Fig 13).

**As to claim 14, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 9 above, **in addition Itako** teaches a template that is previously obtained from an authentic sheet (Paragraph 33, lines 1-11).



**Itako fails to disclose** calculating difference between the identification object image data and detecting an unnecessary image in the identification object image data based on the difference thus calculated.

However, **Suzuki** teaches calculating difference between the identification object image data and detecting an unnecessary image in the identification object image data based on the difference thus calculated (Column 17, lines 57-62).

It would have been obvious to one skilled in the art at the time of the invention to include the unnecessary image detecting means of **Suzuki** in the identifying device of **Itako** in order to reduce the amount of counterfeit material being made or distributed.

**As to claim 15, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 14 above, **in addition Itako** teaches the sheet is identified based on the difference (Paragraph 12, lines 1-7).

**And as to claim 16, Itako** in view of **Suzuki** discloses all of the claimed limitations as applied to claim 9 above, **in addition Itako** teaches the sheet is identified by comparing the identification object image data corrected for the unnecessary image with the template (Paragraph 33, lines 1-11).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IYABO S. ALLI whose telephone number is 571-270-1331. The examiner can normally be reached on M-Thurs. 7:30a- 5pm, 1st F-OFF & 2nd F- 7:30a-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IYABO S. ALLI  
Examiner  
Art Unit 2877  
December 20, 2007

*I.A.*

  
LAYLA G. LAUCHMAN  
PRIMARY EXAMINER